

IN THE CLAIMS

1. A packaged liquid crystal display comprising:
- a containment structure having a bottom surface;
- a liquid crystal cell including a die having a pixel array, a transparent plate attached to the die, and a liquid crystal material disposed in a gap region between the die and the transparent plate, the liquid crystal cell being positioned at least partially within the containment structure; and

a plurality of spaced apart stabilizers arranged to couple edge portions of the liquid crystal cell to the containment structure without adhering the bottom surface of the liquid crystal cell to the bottom surface of the containment structure.

2. A packaged liquid crystal display as recited in claim 1 further comprising a support material arranged to support the liquid crystal cell in a floating manner within the containment structure.

3. A packaged liquid crystal display as recited in claim 1 wherein the stabilizers are sufficiently compliant such that they do not induce substantial stresses in the LCD assembly.

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4. A packaged liquid crystal display as recited in claim 1 wherein the containment structure includes a substrate having a recess therein, the liquid crystal cell being at least partially contained within the recess.

5. A packaged liquid crystal display as recited in claim 4 wherein the includes one of aluminum or ceramic.

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6. A packaged liquid crystal display as recited in claim 4 wherein the substrate is comprised of Alloy Ash 42.

7. A packaged liquid crystal display as recited in claim 1 wherein the plurality of spaced apart stabilizers provide a mechanically stable system.

8. A packaged liquid crystal display as recited in claim 7 including four spaced apart stabilizers.

9. A packaged liquid crystal display as recited in claim 1 wherein the thickness of the thermal support material is between approximately 3 and 8 mils.

10. A packaged liquid crystal display as recited in claim 7 wherein thermal support material is a thermal grease.

11. A packaged liquid crystal display as recited in claim 1 wherein the plurality of spaced apart stabilizers prevent flow of an encapsulating material.

12. A packaged liquid crystal display as recited in claim 1 wherein each of the plurality of spaced apart stabilizers are anchored solely to the side of the liquid crystal cell.

13. A packaged liquid crystal display as recited in claim 1 wherein all the structures adhering to the cell have a rigidity less than the liquid crystal display.

14. A method of packaging a liquid crystal display assembly comprising:
dispensing a thermal support material in a containment structure;
disposing a liquid crystal cell at least partially within the containment structure,
the liquid crystal cell including a die having a pixel array, a transparent plate attached to

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the die, and a liquid crystal material disposed in a gap region between the die and the transparent plate; and

forming a plurality of spaced apart stabilizers arranged to couple an edge portion of the liquid crystal cell to the containment structure without adhering the bottom surface of the liquid crystal cell to the bottom surface of the containment structure.

15. The method of claim 14 further including wire bonding a plurality of leads from the die to a plurality of leads on the containment structure.

16. The method of claim 15 further including depositing encapsulating material over the plurality of leads.

17. The method of claim 16 wherein the encapsulating material is prevented from surrounding the liquid crystal cell.

18. The method of claim 16 wherein a cycle time for a single cell is less than five hours.

19. The method of claim 14 wherein the plurality of spaced apart stabilizers are arranged in manner such that no substantially no stresses are imposed on the liquid crystal cell.

20. The method of claim 14 wherein the thermal support material is disposed such that none of the plurality of spaced apart stabilizers may be dispensed below the liquid crystal cell.

21. The method of claim 14 wherein the plurality of spaced apart stabilizers are anchored solely to the side of the liquid crystal cell.